

Reforestation for MS4 Credit in Frederick County, MD

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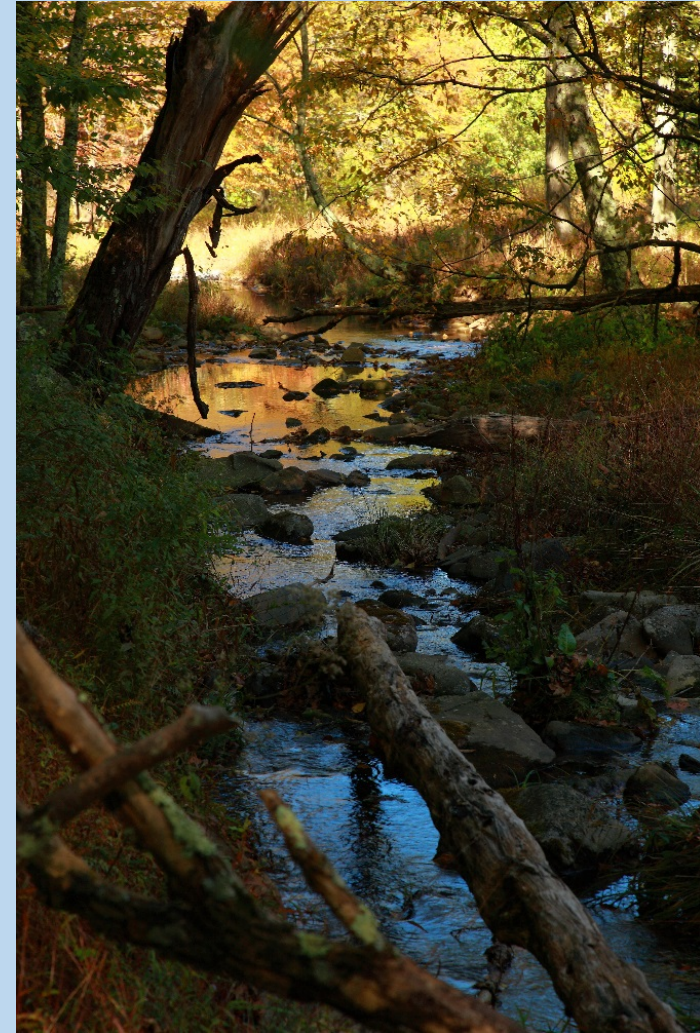


Role of reforestation in Frederick County's MS4 Program

- County currently has about 475 planted acres for approximately 180 impervious acre credits towards the MS4 permit compliance
- Of that, around 205 of the acres come through the Creek ReLeaf program, while the remainder are from grant funded and public interest initiatives since 2007.
- Planting scale ranges from one to 35 acres in size currently.

Creek ReLeaf Program

- Creek ReLeaf provides private landowners with native trees and shrubs planted on their property at no cost to them.
- Landowners application is very simple and requires no commitment. Applications are subjected to a rigorous review for program requirements and existing encumbrances on the property prior to a landowner commitment and survey.
- County pays for a permanent reforestation easement that will be placed on the planted parcel. Easement is 75% of fair market value with a maximum payment of \$9,000 per acre.



Creek ReLeaf Program

- County retains contractors on bridgeable indefinite quantity contracts to create planting plans, appraise planting areas, conduct settlements on easements, procure native trees and shrubs, shelters and supplies, plant the trees, create as-builts.
- We pay for and contract 5 years of maintenance to establish the forest stand.
- After the initial 5 years, the property maintenance reverts to the land owner in perpetuity and the County inspects every three years to ensure compliance.
- Creek ReLeaf won second place BUBBA in 2019 in the habitat category and that we are a multiyear recipient of the PLANT Award



Identification of Sites

- Reforestation is addressed at each of the outreach events conducted by OSER, advertised on our website and promoted through news articles and media when projects are completed.
- Word of mouth plays a large role in the County's identification of reforestation opportunities.
- Creek ReLeaf is currently the major reforestation program utilized by the County, accounting for approximately 43% of the assets in place after one round of implementation. This program relies on a yearly pool of applicants for sites.
- Non-Creek ReLeaf sites have been identified through interactions with the public including HOAs and social clubs.

Establishment and verification of plantings

- Establishment varies depending upon the program and funding source utilized for a particular planting. Grant requirements and HOA or stakeholder requirements play a role in the number and types of trees planted.
- For Creek ReLeaf we plant a minimum of 350 trees per acre with a planting plan and as-built deliverable from the contractor. The County verifies the as-built before payment is issued, there is a one year check for the warranty, then triennial inspections for MS4 Credit thereafter.
- For the Non-Creek ReLeaf sites, we have triennial inspections for MS4 crediting at a minimum and additional inspections as required by grant or other funding sources.

Reforestation role in County objectives

- Frederick County has an interest in increasing the amount of forest retention and creation in the jurisdiction with the overall goal of no net loss.
- County owned properties: OSER works with the Parks and Recreation division and the Division of Public Works to plant trees that help with beautification and stabilization efforts as well as a solution of large tracts of “unused” land.

Reforestation Costs

- For Grant related and other funding sources, we follow their direction on the amount of trees and types to work within the allotted financial contributions.
- For Creek ReLeaf, we utilize both CIP and operational budgets. We have also been awarded grants on a reimbursement basis. The numbers below reflect operational costs for both situations:
 - Easement is 75% of fair market value of the land determined by professional appraisal, the maximum easement payment is \$9,000 per acre planted,
 - Program costs to get trees planted is approximately \$17,000 per planted acre and includes:
 - Easement payment,
 - Appraisal to determine easement value,
 - survey of reforestation area,
 - Settlement costs,
 - Planting and maintenance efforts for the 5 year period,
 - County staff time

Reforestation Costs

- After applying the crediting ration, this equates to about \$45,000 per impervious acre credit towards the MS4 permit compliance.
- This is the projected ceiling amount for implementation of the program; costs may be much lower based on the amount of pre-planting maintenance needed on a property and an easement compensation amount lower than the maximum \$9,000 per acre.
- The Creek ReLeaf program is also implemented on County Owned land where the easement payment is not needed.
- Important to note these are the costs for total program implementation for permanent credit retention. After the five years of maintenance the County has no other obligations for credit retention besides the triennial inspections.

Costs Comparison

- Reforestation efforts: \$45,000 or less per impervious acre credit total with maintenance included.
- Stormwater pond retrofits efforts are averaging \$36,000 per impervious acre credit, but this does not take long term maintenance and repairs into account.
- Stream Restoration efforts:
 - Utilizing the 0.01 acre credit per linear foot the average is approximately \$66,000 per credit.
 - Utilizing the 0.03 acre credit per linear foot the average is approximately \$22,000 per credit.
 - This does not account for monitoring or long term maintenance and repair costs.

Questions?

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<https://www.frederickcountymd.gov/reforest>

